DOCUMENT RESUME

ED 160 509 SO 011 182

| | |
|---|---|
| TITLE | Country Demographic Profiles: Thailand. |
| INSTITUTION | Bureau of the Census (DOC), Suitland, Md. Population Div. |
| REPORT NO | ISP-DP-15 |
| PUB DATE | Apr 78 |
| NOTE | 43p.; Not available in hard copy from EDRS due to small type size of parts of the original document |
| AVAILABLE FROM | Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($1.60, paper cover) |
| EDRS PRICE | MF-$0.83 Plus Postage. HC Not Available from EDRS. |
| DESCRIPTORS | Birth Rate; Census Figures; *Comparative Education; Death; *Demography; Developing Nations; Enrollment; Family Planning; Foreign Countries; Infant Mortality; Labor Force; Marital Status; Migration; *National Demography; Population Distribution; Population Growth; *Tables (Data); Urban Population |
| IDENTIFIERS | *Thailand |

ABSTRACT

This profile of the population of Thailand contains 35 tables of selected demographic information, including size of population and estimates of fertility and mortality, beginning in 1950. An adjusted distribution of the population by age and sex is given for the latest census year, as well as for 1976. Projections of the number of women of childbearing age are shown for each year to 1985. Fertility measures include crude birth rates, age-specific fertility rates, and gross and net reproduction rates. Mortality is shown in terms of crude death rates, life expectancy at birth, infant mortality rates, and selected life table values by age and sex. Also presented is summary information on family planning, urban population, marital status, and migration. Other related items are included that are not strictly demographic. These include number and size of households; educational attainment; school enrollment; and labor force by industry, occupation, and status. Also presented are a glossary of terms and a review of sources of the data. (Author/AV)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED160509



003-024-01494-7
A1.60
ERIC
OCT 12 1978
SD

# THAILAND

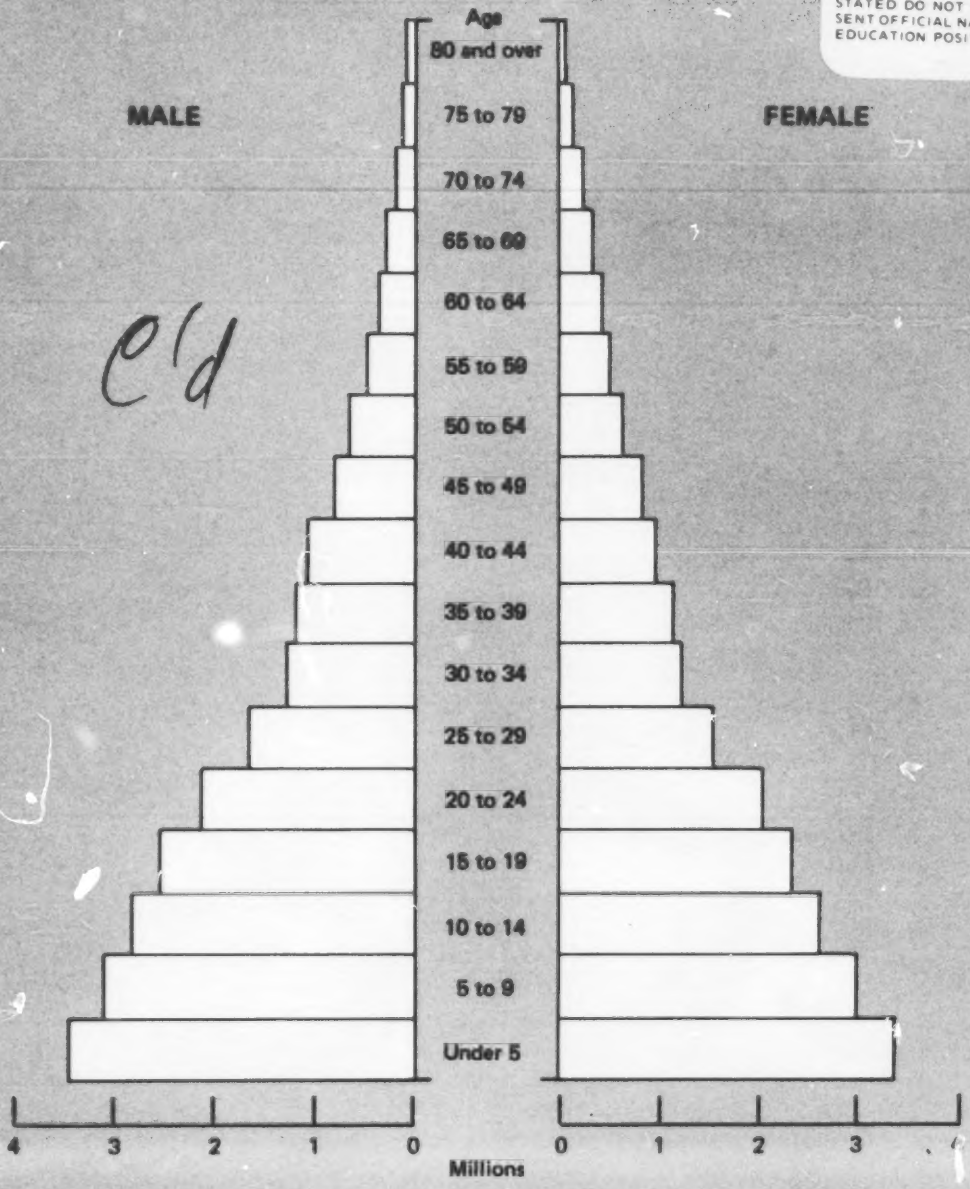
ISP-DP-15
Issued April 1978

U.S. Department of Commerce
BUREAU OF THE CENSUS

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

**Population of Thailand, by age and sex: July 1, 1976**




Projection based on Thailand's 1970 census of population, as adjusted by the U.S. Bureau of the Census, table 2, of this report.

**U.S. Department of Commerce**
Juanita M. Kreps, Secretary
Courtenay M. Slater, Chief Economist

BUREAU OF THE CENSUS
Manuel D. Plotkin, Director

Robert L. Hagan, Deputy Director

Daniel B. Levine, Associate Director
for Demographic Fields

POPULATION DIVISION
Meyer Zitter, Chief

ACKNOWLEDGMENTS

Country Demographic Profiles is a new series of reports which brings together a variety of demographic data for selected countries of the world, and usually includes data for both a recent census year and the current period. The reports are prepared in the Population Division, Bureau of the Census, under a Resources Support Services Agreement with the Development Support Bureau, Agency for International Development. General direction was provided by **Samuel Baum**, Assistant Chief (International Demographic Statistics), Population Division. This profile on Thailand was prepared by **James F. Spitler.** Tables 1 to 13 were prepared under the supervision of **Sylvia D. Quick**, Acting Chief, International Data Evaluation Branch. Tables 14 to 25 were prepared under the supervision of **Ellen Jamison**, Chief, International Demographic Analysis Branch.

Users of this report are invited to send their comments to the Chief, Population Division, Bureau of the Census, Washington, D.C. 20233.

---

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Stock No. 003-024-01494-7

008358

# THAILAND

ISP-DP-15
Issued April 1978

## Contents

Page

INTRODUCTION
Sources and quality of data . . . . . 1
Glossary . . . . . 3

DETAILED TABLES

Table
1. Estimates and projections of midyear population: 1950 to 1976 . . . . . 4
2. Estimated and projected population, by age and sex: April 1970 and midyear 1976 . . . . . 5
3. Estimated and projected vital rates: 1960, 1970, and 1976 . . . . . 6
4. Estimated infant mortality rate and life expectancy at birth: 1960 and 1970 . . . . . 7
5. Estimated life table values, by sex: 1970 . . . . . 8
6. Projected number of women of childbearing age: 1970, and 1975 to 1985 . . . . . 9
7. Estimated age-specific fertility rates and selected derived measures: 1960, 1964 to 1965, and 1970 . . . . . 9
8. Ever-married women, ages 15 years and over, by number of children ever born: 1970 . . . . . 10
9. Average number of children ever born per ever-married women by age, from selected sources: 1970, 1974 to 1975, and 1975 . . . . . 10
10. Distribution of births, by order of birth: 1973 . . . . . 11
11. Percent distribution of women ages 15 to 49 years, by marital status: 1975 . . . . . 11
12. Measures of age at marriage for women: 1975 and 1976 . . . . . 12
13. Number of new acceptors and active users of contraception, and users as a percent of married women, ages 15 to 49 years, by method, for selected years: 1965 to 1976 . . . . . 13
14. Percent literate, ages 15 years and over, by sex: 1970 . . . . . 14
15. Percent of population, ages 6 to 19 years, enrolled in school, by sex: 1970 . . . . . 14
16. Percent of population, ages 15 years and over, who have completed school, by level and sex: 1970 . . . . . 15
17. Percent of the civilian noninstitutional population economically active, by age and sex: 1975 . . . . . 16
18. Distribution of the civilian labor force, by sex and industry: 1975 . . . . . 17
19. Distribution of the civilian labor force, by sex and occupation: 1975 . . . . . 18
20. Distribution of civilian agricultural and nonagricultural workers, by sex and status: 1975 . . . . . 19
21. Percent distribution of households, by number of persons: 1970 . . . . . 20
22. Selected urban measures: 1970 . . . . . 21
23. Changwat population, growth rates, and migration data . . . . . 22
24. Persons of foreign citizenship, by country: 1970 . . . . . 24
25. Selected social and economic items . . . . . 24

APPENDIX TABLES

Table
A-1. Census population, by age and sex: April 1970 . . . . . 25
A-2. Estimated and projected total and age-specific fertility rates: 1970 and 1976 . . . . . 26
A-3. Alternate estimates of total and age-specific fertility rates from selected sources: Selected periods, 1960 to 1975 . . . . . 27

# Contents—Continued

## APPENDIX TABLES—Continued


| Table | | Page |
|---|---|---|
| A-4. | Weighted age-specific marital fertility rates reported by the Thai Longitudinal Study: 1968 to 1969 and 1971 to 1972 | 28 |
| A-5. | Estimated and projected life expectancy at birth, by sex: 1960, 1970, and 1976 | 28 |
| A-6. | Reported infant mortality rate and life expectancy at birth, by sex, from the Survey of Population Change: 1964 to 1965 and 1974 to 1975 | 29 |
| A-7. | Percent of population economically active, by age and sex: 1970 | 30 |
| A-8. | Distribution of the labor force, by sex and industry: 1970 | 31 |
| A-9. | Distribution of the labor force, by sex and occupation: 1970 | 32 |
| A-10. | Distribution of agricultural and nonagricultural workers, by sex and status: 1970 | 33 |
| MAJOR SOURCES | | 34 |

# Thailand

## INTRODUCTION

This profile of the population of Thailand contains tables of selected demographic information, including size of population, and estimates of fertility and mortality. Specifically, annual estimates of total population are shown beginning in 1950. An adjusted distribution of the population by age and sex is given for the latest census year, as well as for 1976. Projections of the number of women of childbearing age are shown for each year to 1985.

Fertility measures shown in the profile include crude birth rates, age-specific fertility rates, and gross and net reproduction rates. Mortality is shown in terms of crude death rates, life expectancy at birth, infant mortality rates, and selected life table values by age and sex.

Also presented is summary information on family planning, urban population, marital status, and some data from which past migration can be inferred. Other related items are included that are not strictly demographic, such as number and size of households; educational attainment; school enrollment; labor force by industry, occupation, and status; and some other selected indicators.

## SOURCES AND QUALITY OF DATA

Data for this profile were obtained primarily from the April 25, 1960, and April 1, 1970, population censuses, the 1964 to 1967 and 1974 to 1975 Surveys of Population Change, the Thai Longitudinal Study of Social, Economic and Demographic Change, and the Survey of Fertility in Thailand. The quality of the age-sex distributions from the 1960 and 1970 censuses would be described as reasonably reliable based on the United Nations Age-Sex Accuracy Index (scores of 19 and 18 for 1960 and 1970, respectively). The index does not take into consideration expected declines in the sex ratios with increasing age, normal fluctuations in the number of births and deaths, nor real fluctuations due to migration, war, and epidemic. The U.N. Age-Sex Accuracy Index is primarily a measure of net age misreporting and, for the most part, does not measure net coverage error. However, based on an evaluation of the 1960 and 1970 censuses (see table 2 for adjusted 1970 census population), the following net (percent) underenumeration was found for the total population and the population under age 10, by sex, in 1960 and 1970:

| Sex and age | 1960 | 1970 |
|---|---|---|
| Both sexes | | |
| All ages | 4.0 | 6.6 |
| Under age 10 | 9.5 | 5.1 |
| Male | | |
| All ages | 5.4 | 8.5 |
| Under age 10 | 11.0 | 6.0 |
| Female | | |
| All ages | 2.6 | 4.6 |
| Under age 10 | 7.9 | 4.1 |

Thailand has a vital registration system which tabulates vital events by year of registration rather than occurrence, but the system is considered to be incomplete. Findings from the 1964 to 1965 and 1974 to 1975 Surveys of Population Change (SPC's), both of which utilized a dual record system methodology, indicate that the completeness of birth registration declined from approximately 85 percent in the 1964 to 1965 period (Arnold and Retherford, 1977, p. 10) to approximately 70 percent for the 1974 to 1975 period (Thailand NSO, 1976d, table 15). Similar declines in the completeness of death registration were also observed, from 63 percent in the 1964 to 1965 period (Arnold and Retherford, 1977, p. 18) to 59 percent in the 1974 to 1975 period (Thailand NSO, 1976d, table 15). It should be noted that the area of Bangkok-Thonburi was excluded from the earlier survey; thus, the reported levels may not reflect actual levels of completeness for the whole kingdom. Based on the adjusted 1960 and 1970 census age-sex distributions moved to midyear, estimated age-specific fertility rates (see table 7), and age-sex-specific mortality rates (for 1970, see table 5), birth and death registration in 1960 was estimated at the U.S. Bureau of the Census to be 77 and 63 percent complete, respectively. In 1970 the completeness of birth and death registration was estimated to be 80 and 58 percent complete, respectively.

Since vital statistics for Thailand are inadequate, the sources used for estimating fertility and mortality included the 1960 and 1970 censuses, the 1964 to 1965 and 1974 to 1975 SPC's, the 1969 to 1972 Thai Longitudinal Study of

Social, Economic and Demographic Change, and results for the period 1965 to 1969 from the 1975 Survey of Fertility in Thailand (World Fertility Survey). The results from the 1975 Survey of Fertility in Thailand for the period 1970 to 1974 were taken into consideration in setting the lower bound for the 1976 projected estimate of fertility. For a more detailed discussion of these sources and the quality of data obtained, see tables 4 and 7, and appendix tables A-2, A-3, and A-6.

Data on economic activity and the labor force by industry, occupation, and status are based on results from the first (January to March) and second (July to September) rounds of the 1975 Labor Force Survey. Since this survey indicated considerable shifts in the structure of the labor force between 1970 and 1975, data on the labor force from the 1970 census are presented in appendix tables A-7 to A-10.

The user should recognize that in many instances, although the estimates are the best that can be prepared on the basis of available information, they are only tentative and new observations may well lead to different conclusions. The user is urged to consider all data in the context of the source notes which describe how the figures were derived. Complete documentation, including worksheets and other notes on all sources considered, is maintained in the Population Division. The user who has special interest in the data is invited to correspond with the Population Division for further details as well as to offer comments.

# Glossary

(Following are definitions of terms as used in the tables and the notes of this profile)

**Active users.** Persons using methods of contraception at a given point in time.

**Age pattern of fertility.** The percent distribution of a set of age-specific fertility rates. It expresses the relative contribution of each age group to total fertility.

**Age-specific fertility rate.** The number of births during 1 year to women in a given 5-year age group per 1,000 women in the same age group (based on midyear population).

**Age-specific marital fertility rate.** The number of births to married women in a given age group per 1,000 married women in the same age group.

**Birth rate.** The number of births during 1 year per 1,000 persons (based on midyear population). Also called crude birth rate.

**Children ever born.** The number of live births an ever-married woman has had regardless of whether the children are now living or dead, or living with or away from the mother.

**Cohort.** A group of individuals who experience the same event in the same calendar period, such as the same year of birth or marriage.

**Component method.** A method of projecting the size of a population by age and sex, in which separate assumptions are made concerning the future fertility, mortality, and migration rates of the population.

**Crude birth rate.** See birth rate.

**Crude death rate.** See death rate.

**Death rate.** The number of deaths during 1 year per 1,000 persons (based on midyear population). Also called crude death rate.

**Ever-married women.** All women who are now, or who have been, married. The category includes the currently married, and the widowed, divorced, or separated.

**Gross reproduction rate.** The average number of daughters born per woman in a group of women passing through the childbearing years and experiencing a given set of age-specific fertility rates. This rate implicitly assumes that all the women live to the end of the childbearing years. (See also net reproduction rate.)

**Growth rate.** The annual increase (or decrease) to the population resulting from a surplus or deficit of births over deaths and a surplus or deficit of migrants into or out of the country, expressed as a percentage of the base population.

**Infant mortality rate.** The number of deaths of children under 1 year of age per 1,000 live births in a calendar year.

**Life expectancy at birth.** The average number of years to be lived by persons born in a certain year if mortality rates for each age group remain constant in the future.

**Median age of childbearing.** The midpoint age that separates the younger half of all women giving birth in a given year from the older half.

**Net reproduction rate.** A refinement of the gross reproduction rate that allows for mortality of women from birth to the end of their reproductive years.

**New acceptors.** Persons accepting methods of contraception from family planning systems may include clients changing from one service organization to another; clients changing to a different contraceptive method; clients resuming acceptance of contraceptive services after a lapse of 1 year; as well as clients accepting contraceptive services for the first time.

**Rate of natural increase.** The annual increase (or decrease) to the population resulting from a surplus or deficit of births over deaths, expressed as a percentage of the midyear population. The natural increase of the population does not include the migration of persons into or out of the country.

**Sex ratio at birth.** The number of male births for each female birth.

**Total fertility rate (TFR).** The average number of children that would be born per woman if all women lived to the end of their childbearing years and bore children according to a given set of age-specific fertility rates. It is five times the sum of the age-specific fertility rates, divided by 1,000.

**United Nations Age-Sex Accuracy Index.** An index developed by the United Nations to measure irregularities in age distributions in 5-year age groups. Index values of less than 20 usually describe "reasonably reliable" age distributions, values between 20 and 40 "fairly unreliable" age distributions, and values over 40 "quite unreliable" age distributions. The United Nations states that although high test scores may reflect actual irregularities in the age data caused by past demographic fluctuations or international migrations, usually, to a larger extent, they reflect errors in the age data.

## Table 1. ESTIMATES AND PROJECTIONS OF MIDYEAR POPULATION: 1950 TO 1976

(In thousands)

| Year | Population | Year | Population | Year | Population |
|---|---|---|---|---|---|
| ESTIMATES | | ESTIMATES--Con. | | PROJECTIONS | |
| 1950..... | 20,042 | 1960..... | 27,513 | 1971..... | 38,146 |
| 1951..... | 20,653 | 1961..... | 28,376 | 1972..... | 39,208 |
| 1952..... | 21,289 | 1962..... | 29,263 | | |
| 1953..... | 21,964 | 1963..... | 30,174 | 1973..... | 40,280 |
| 1954..... | 22,685 | 1964..... | 31,107 | 1974..... | 41,363 |
| | | 1965..... | 32,062 | 1975..... | 42,457 |
| | | 1966..... | 33,036 | 1976..... | 43,567 |
| 1955..... | 23,451 | 1967..... | 34,024 | | |
| 1956..... | 24,244 | 1968..... | 35,028 | | |
| 1957..... | 25,042 | 1969..... | 36,050 | | |
| 1958..... | 25,845 | | | | |
| 1959..... | 26,657 | 1970..... | 37,091 | | |

Source: The 1950 to 1970 estimates are based on results of the 1960 and 1970 population censuses, adjusted at the U.S. Bureau of the Census for estimated net underenumeration of 4.0 percent and 6.6 percent, respectively, and estimated fertility, mortality, and migration trends during the two decades. The 1960 census population was adjusted as follows: 1) the age-sex distribution was smoothed for age misreporting; 2) the smoothed distributions were adjusted to an expected pattern of sex ratios by age; and 3) the population under 10 years of age was estimated based on assumed birth rates and survival ratios for the 10 years preceding the census. The 1970 census was adjusted as follows: 1) the adjusted 1960 age-sex distribution was survived to 1970 based on estimated levels and trends in mortality (see table 4 and appendix table A-5); and 2) the population under 10 years of age was based on estimated levels and trends in fertility (and appropriate survival ratios from estimated life tables) during the intercensal period (see table 7).

Estimates between 1950 and 1959 are based on the adjusted 1960 census moved to midyear, adjusted registered births and deaths, and estimated net immigration. Three-year moving averages of registered births and deaths were adjusted by linearly interpolating between estimated correction factors for 1947 and 1960. The 1947 correction factors are from an analysis by Bourgeois-Pichat (1959, table IX) using the 1937 and 1947 censuses, and registered births and deaths. The 1960 correction factors were based on the ratio of births and deaths implied by estimated age-specific fertility rates (see table 7) and life table central death rates, applied to the 1960 adjusted midyear age-sex distribution, to a three year average (1959 to 1961) of registered births and deaths. Estimates of migration were based on the total net immigration during the 1947 to 1960 intercensal period (Thailand Division of Vital Statistics, 1970, p. B), and the assumption that the average intercensal net immigration, applied to the midpoint of the period, declined to an insignificant level by 1960.

Estimates between 1960 and 1970 are based on the adjusted 1960 and 1970 censuses moved to midyear, estimated age-specific fertility rates (see table 7) and male and female life tables (see tables 4 and 5) for the intercensal period. Net international migration was assumed to be nil after 1960.

Other researchers have found levels of underenumeration for the 1960 and 1970 censuses which are lower than those reported in the present analysis. An official adjusted 1960 midyear population estimate (Chulalongkorn University and Thailand National Statistical Office, 1973, table 9) moved to the census date implies net underenumeration of 0.8 percent. The United Nations (1966, table 8) and Das Gupta, et al. (1965, table 20), conducting independent analyses, estimated a total net underenumeration of approximately 2.7 percent in the 1960 census. In 1970, the National Statistical Office conducted a Post Enumeration Survey in approximately 6.0 percent and 1.6 percent of municipal and nonmunicipal enumeration districts, respectively. The results indicated a total net underenumeration of 1.7 percent (Arnold and Phananiramai, 1975, table 13). An independent analysis of the 1970 census conducted by Arnold and Phananiramai (1975, p. 5) reports a 4.7 percent total net underenumeration. Boonpratuang and Robinson (as reported in Arnold and Phananiramai, 1975, table 13), report a 4.5 percent total net under-

## Table 1. ESTIMATES AND PROJECTIONS OF MIDYEAR POPULATION: 1950 TO 1976—Continued

Source--Continued

enumeration based on an analysis of a 1 percent sample of 1970 census returns. Fulton (1975, tables 16 and 22) reports a net underenumeration of 5.3 percent for the 1970 reported census population under 80 years of age based on adjusted 1960 census data, survival ratios from model data, and age-specific fertility rates from the 1964 to 1967 Survey of Population Change (SPC). The substitution of survival ratios from the SPC resulted in a 5.9 percent net underenumeration for the reported population under 70 years of age. Combining the adjusted and unadjusted portions of the population implies estimates of total net underenumeration for the 1970 census of 5.0 percent based on the first procedure and 5.5 percent based on the second procedure.

The 1971 to 1976 population figures were projected by the component method. The base of the projections was the 1970 adjusted census population, by age and sex. Assumptions were as follows:

Fertility: The total fertility rate of 5.87 in 1970 (see table 7) decreased to 4.92 in 1976, a reduction of 16 percent. This assumes an acceleration of the estimated decline in the total fertility rates between the 1964 to 1965 period and 1970. See table 7 and appendix table A-2 for age-specific fertility rates since 1960.

Mortality: Life expectancies at birth increased from 56 years in 1970 to 57 years in 1976 for males and from 60 years in 1970 to 61 years in 1976 for females based on past trends in mortality (see table 4 and appendix table A-5 for life expectancies at birth since 1960).

Migration: Net international migration was assumed to be nil during the projection period.

## Table 2. ESTIMATED AND PROJECTED POPULATION, BY AGE AND SEX: APRIL 1970 AND MIDYEAR 1976

(In thousands. Figures may not add to totals due to rounding)

| Age | Adjusted census, April 1970[1] | | | Projected population, midyear 1976 | | |
|---|---|---|---|---|---|---|
| | Both sexes | Male | Female | Both sexes | Male | Female |
| All ages..... | 36,825 | 18,723 | 18,102 | 43,567 | 22,126 | 21,441 |
| 0 to 4 years..... | 6,155 | 3,146 | 3,009 | 6,758 | 3,442 | 3,316 |
| 5 to 9 years..... | 5,390 | 2,760 | 2,629 | 6,122 | 3,123 | 2,999 |
| 10 to 14 years..... | 4,797 | 2,461 | 2,337 | 5,501 | 2,815 | 2,686 |
| 15 to 19 years..... | 3,970 | 2,037 | 1,933 | 4,890 | 2,506 | 2,383 |
| 20 to 24 years..... | 3,043 | 1,560 | 1,483 | 4,115 | 2,109 | 2,006 |
| 25 to 29 years..... | 2,441 | 1,249 | 1,192 | 3,168 | 1,623 | 1,546 |
| 30 to 34 years..... | 2,360 | 1,205 | 1,154 | 2,472 | 1,264 | 1,208 |
| 35 to 39 years..... | 2,014 | 1,027 | 987 | 2,333 | 1,190 | 1,142 |
| 40 to 44 years..... | 1,691 | 858 | 833 | 2,033 | 1,034 | 999 |
| 45 to 49 years..... | 1,282 | 646 | 636 | 1,699 | 859 | 840 |
| 50 to 54 years..... | 1,039 | 518 | 520 | 1,287 | 644 | 643 |
| 55 to 59 years..... | 863 | 425 | 438 | 1,000 | 494 | 506 |
| 60 to 64 years..... | 677 | 328 | 348 | 802 | 389 | 413 |
| 65 to 69 years..... | 496 | 235 | 261 | 603 | 286 | 317 |
| 70 to 74 years..... | 329 | 151 | 178 | 410 | 189 | 221 |
| 75 to 79 years..... | 172 | 75 | 97 | 242 | 107 | 135 |
| 80 years and over..... | 107 | 42 | 66 | 134 | 53 | 80 |

[1]For unadjusted census figures see appendix table A-1.

Source: See note to table 1.

## Table 3. ESTIMATED AND PROJECTED VITAL RATES: 1960, 1970, AND 1976

| Year | Births per 1,000 population | Deaths per 1,000 population | Rate of natural increase (percent) | Growth rate (percent) |
|---|---|---|---|---|
| 1960..... | 43 | 12 | 3.1 | 3.1 |
| 1970..... | 39 | 10 | 2.8 | 2.8 |
| 1976..... | 35-36 | 10 | 2.5-2.6 | 2.5-2.6 |

Source: The 1960 and 1970 crude birth rates were estimated at the U.S. Bureau of the Census based on adjusted census populations moved to midyear and estimated age-specific fertility rates (see table 7). Crude death rates for 1960 and 1970 were estimated based on the respective adjusted censuses moved to midyear and age-sex-specific life table central death rates ($m_x$ values as defined in table 5). The life tables were derived at the U.S. Bureau of the Census (see table 4).

The range in vital rates for 1976 is implied by alternate component population projections. These projections assume that the total fertility rate (TFR) of 5.87 in 1970 declined to 5.10 in 1976 for the upper bound, a reduction of 13 percent. This change is based on the acceptance of the 1974 to 1975 TFR reported in the Survey of Population Change (see appendix table A-3) and the assumption that the rate of decline between 1975 and 1976 would be 75 percent of the average annual rate of decline exhibited by the 1970 estimated TFR and the 1974 to 1975 TFR reported in the Survey of Population Change.

The lower-bound projection assumes that the 1970 estimated TFR will decline by 20 percent to a level of 4.70 in 1976. This change takes into consideration results from the Survey of Fertility in Thailand (see appendix table A-3), and official national projection series (Thailand NSO, 1976a). For mortality and migration assumptions, see table 1. A crude birth rate of 35 and a crude death rate of 10 for 1976 are consistent with the projection series in table 1.

Rates of natural increase were calculated from unrounded crude birth and death rates. They may not equal the difference between the crude birth and death rates shown due to rounding. Growth rates are the same as the rates of natural increase indicating that net international migration was not significant for these years.

## Table 4. ESTIMATED INFANT MORTALITY RATE AND LIFE EXPECTANCY AT BIRTH: 1960 AND 1970

| Year | Infant deaths per 1,000 live births | Life expectancy at birth (years) |
|---|---|---|
| 1960..... | 106 | 55 |
| 1970..... | 90 | 58 |

Source: Infant mortality rates were derived from life table $q_0$ values, weighted by an assumed sex ratio at birth of 1.05 (see below for details of 1960 and 1970 life tables). See appendix table A-6 for infant mortality rates reported in the 1964 to 1965 and 1974 to 1975 Surveys of Population Change.

Life expectancies at birth for males in 1960, and for males and females in 1970 were estimated by a graphic stable population technique which is based on a simultaneous comparsion of the proportion of population and death distributions, by broad age groups, from stable populations with similar proportions from preliminary adjusted census population distributions and standardized distributions of deaths. The standardized distributions were derived from age-sex-specific death rates (based on three-year averages of registered deaths, by age and sex, and the unadjusted census age-sex distributions) applied to the preliminary adjusted census population distributions. The 1960 life expectancy at birth for females was estimated by a graphic stable population technique similar to that described above, based on the proportion of standardized deaths and an estimated growth rate. See appendix table A-6 for life expectancies at birth reported in the 1964 to 1965 and 1974 to 1975 Surveys of Population Change.

The pattern of mortality for 1960 was based on the pattern observed in the life tables from the 1964 to 1965 Survey of Population Change (Thailand NSO, no date, table 7), adjusted by the logit technique (Brass and Coale, 1968, pp. 127-135). The 1970 pattern of mortality was based on the change in the pattern between 1964 to 1965 and 1974 to 1975 as observed in the life tables from the Surveys of Population Change (see Thailand NSO, 1976d, table 6 for results from the 1974 to 1975 survey), adjusted by the logit technique.

## Table 5. ESTIMATED LIFE TABLE VALUES, BY SEX: 1970

| Age interval (x to x+n) | Annual number of deaths per 1,000 persons occurring between age x and age x + n $\left({}_{1000}{}_{n}m_{x}\right)$ | In stationary population | | Average number of years of life remaining for those alive at exact age x $\left(e_x\right)$ |
|---|---|---|---|---|
| | | Number of persons living at exact age x $\left(l_x\right)$ | Number of persons living between age x and age x + n $\left({}_{n}L_{x}\right)$ | |
| MALE | | | | |
| Under 1 year | 99.1 | 100,000 | 93,594 | 56.5 |
| 1 to 4 years | 9.3 | 90,728 | 354,250 | 61.2 |
| 5 to 9 years | 2.4 | 87,430 | 434,540 | 59.5 |
| 10 to 14 years | 1.8 | 86,386 | 430,017 | 55.2 |
| 15 to 19 years | 2.8 | 85,621 | 425,166 | 50.7 |
| 20 to 24 years | 3.9 | 84,445 | 418,144 | 46.3 |
| 25 to 29 years | 4.2 | 82,812 | 409,778 | 42.2 |
| 30 to 34 years | 4.7 | 81,099 | 400,744 | 38.0 |
| 35 to 39 years | 5.8 | 79,198 | 390,384 | 33.9 |
| 40 to 44 years | 7.4 | 76,955 | 377,777 | 29.8 |
| 45 to 49 years | 9.8 | 74,156 | 361,865 | 25.8 |
| 50 to 54 years | 13.8 | 70,590 | 341,150 | 22.0 |
| 55 to 59 years | 19.6 | 65,870 | 313,962 | 18.4 |
| 60 to 64 years | 29.0 | 59,715 | 278,427 | 15.0 |
| 65 to 69 years | 42.7 | 51,656 | 233,350 | 12.0 |
| 70 to 74 years | 65.0 | 41,684 | 179,307 | 9.3 |
| 75 to 79 years | 100.4 | 30,038 | 120,067 | 6.9 |
| 80 years and over | 206.2 | 17,988 | 87,230 | 4.8 |
| FEMALE | | | | |
| Under 1 year | 92.3 | 100,000 | 94,016 | 59.5 |
| 1 to 4 years | 8.7 | 91,324 | 357,165 | 64.2 |
| 5 to 9 years | 2.2 | 88,217 | 438,615 | 62.4 |
| 10 to 14 years | 1.7 | 87,229 | 434,263 | 58.0 |
| 15 to 19 years | 2.5 | 86,476 | 429,653 | 53.5 |
| 20 to 24 years | 3.3 | 85,385 | 423,394 | 49.2 |
| 25 to 29 years | 3.8 | 83,973 | 415,887 | 45.0 |
| 30 to 34 years | 4.4 | 82,382 | 407,480 | 40.8 |
| 35 to 39 years | 5.0 | 80,610 | 398,038 | 36.6 |
| 40 to 44 years | 6.0 | 78,605 | 387,245 | 32.5 |
| 45 to 49 years | 7.5 | 76,293 | 374,442 | 28.4 |
| 50 to 54 years | 10.3 | 73,484 | 358,193 | 24.4 |
| 55 to 59 years | 14.3 | 69,793 | 336,949 | 20.6 |
| 60 to 64 years | 21.4 | 64,986 | 308,435 | 16.9 |
| 65 to 69 years | 31.6 | 58,388 | 270,559 | 13.5 |
| 70 to 74 years | 51.1 | 49,836 | 220,975 | 10.4 |
| 75 to 79 years | 80.5 | 38,554 | 160,471 | 7.7 |
| 80 years and over | 187.7 | 25,634 | 136,556 | 5.3 |

Source: See table 4 for detailed source note.

## Table 6. PROJECTED NUMBER OF WOMEN OF CHILDBEARING AGE: 1970, AND 1975 TO 1985

(Midyear population in thousands. Figures may not add to totals due to rounding)

| Year | All women, 15 to 49 years | 15 to 19 years | 20 to 24 years | 25 to 29 years | 30 to 34 years | 35 to 39 years | 40 to 44 years | 45 to 49 years |
|---|---|---|---|---|---|---|---|---|
| 1970 | 8,282 | 1,948 | 1,494 | 1,201 | 1,163 | 995 | 839 | 641 |
| 1975 | 9,815 | 2,331 | 1,920 | 1,469 | 1,178 | 1,137 | 968 | 812 |
| 1976 | 10,124 | 2,383 | 2,006 | 1,546 | 1,208 | 1,142 | 999 | 840 |
| 1977 | 10,439 | 2,435 | 2,087 | 1,628 | 1,252 | 1,140 | 1,032 | 865 |
| 1978 | 10,760 | 2,487 | 2,163 | 1,715 | 1,307 | 1,135 | 1,065 | 888 |
| 1979 | 11,088 | 2,540 | 2,234 | 1,803 | 1,371 | 1,137 | 1,091 | 912 |
| 1980 | 11,424 | 2,596 | 2,300 | 1,889 | 1,441 | 1,152 | 1,108 | 938 |
| 1981 | 11,768 | 2,661 | 2,352 | 1,974 | 1,517 | 1,182 | 1,114 | 968 |
| 1982 | 12,117 | 2,723 | 2,404 | 2,054 | 1,599 | 1,225 | 1,111 | 1,000 |
| 1983 | 12,471 | 2,782 | 2,456 | 2,130 | 1,684 | 1,280 | 1,107 | 1,032 |
| 1984 | 12,829 | 2,838 | 2,509 | 2,200 | 1,771 | 1,343 | 1,110 | 1,058 |
| 1985 | 13,193 | 2,894 | 2,565 | 2,266 | 1,857 | 1,413 | 1,125 | 1,074 |

Source: Projection based on the 1970 adjusted census population (see table 2). Assumptions were as follows:

Fertility: Assumptions regarding fertility have no effect on the number of women in these ages.

Mortality: Life expectancy at birth for women was assumed to increase from 60 years in 1970 to 63 years in 1985.

Migration: Net international migration was nil during the projection period.

## Table 7. ESTIMATED AGE-SPECIFIC FERTILITY RATES AND SELECTED DERIVED MEASURES: 1960, 1964 TO 1965, AND 1970

| Age | Births per 1,000 women | | | Derived measures | | | |
|---|---|---|---|---|---|---|---|
| | 1960 | 1964 to 1965 | 1970 | | 1960 | 1964 to 1965 | 1970 |
| 15 to 19 years | 68 | 66 | 73 | Total fertility rate per woman | 6.53 | 6.30 | 5.87 |
| 20 to 24 years | 218 | 259 | 248 | | | | |
| 25 to 29 years | 309 | 303 | 293 | Gross reproduction rate per woman | 3.19 | 3.07 | 2.86 |
| 30 to 34 years | 299 | 273 | 246 | | | | |
| 35 to 39 years | 239 | 222 | 188 | Net reproduction rate per woman | 2.48 | (NA) | 2.35 |
| 40 to 44 years | 129 | 112 | 105 | | | | |
| 45 to 49 years | 46 | 24 | 22 | Sex ratio at birth | 1.05 | 1.05 | 1.05 |

NA Data not available.

Source: The 1960 total and age-specific fertility rates were derived at the U.S. Bureau of the Census from an average of Brass adjustments to current fertility (Brass and Coale, 1968, pp. 89-104) based on registered births in 1959 and children-ever-born data from the 1960 census. The 1964 to 1965 total and age-specific fertility rates are from the Survey of Population Change (Thailand NSO, no date, table c). Age-specific marital fertility rates for 1970 were derived at the U.S. Bureau of the Census from an average of the 1968 to 1969 and 1971 to 1972 period age-specific marital fertility rates, by urban and rural areas reported in the Thai Longitudinal Study, weighted to a national level by the proportion of females in each age group who were married and living in urban and rural areas as exhibited by the 1970 census (Thailand NSO, 1973, table 5). Total and age-specific fertility rates were obtained by applying the proportion of females in each age group who were reported as married in 1970 (Thailand NSO, 1973, table 5) to the weighted age-specific marital fertility rates. The resulting pattern of fertility for 1970 was adjusted slightly for irregularities. See appendix tables A-3 and A-4 for national level age-specific fertility rates and marital fertility rates reported in the two rounds of the Thai Longitudinal Study. Appendix table A-3 also shows age-specific fertility rates from various other sources which were considered in estimating Thai fertility.

The gross reproduction rates are based on the estimated total fertility rates and sex ratios at birth. The net reproduction rates are based on estimated age-specific fertility rates, the sex ratio at birth, and $L_x$ values from estimated female life tables (see table 4 and appendix table A-5). Sex ratios at birth were assumed to be 1.05. Slightly higher sex ratios at birth of 1.055 and 1.061 are reported in the 1964 to 1965 and 1974 to 1975 Survey of Population Change, respectively (Thailand NSO, no date, table H; and 1976d, table 9). Life table $L_x$ values were not available for calculating a net reproduction rate for the 1964 to 1965 period.

## Table 8. EVER-MARRIED WOMEN, AGES 15 YEARS AND OVER, BY NUMBER OF CHILDREN EVER BORN: 1970

(In thousands. Figures may not add to totals due to rounding)

| Age | Total | Number of children ever born | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 or more |
| All women, 15 years and over.. | [1]6,754 | 318 | 844 | 844 | 799 | 771 | 707 | 623 | 1,847 |
| 15 to 19 years..... | 334 | 149 | 138 | 38 | 7 | 2 | 1 | (Z) | - |
| 20 to 24 years..... | 744 | 59 | 273 | 239 | 118 | 39 | 10 | 3 | 3 |
| 25 to 29 years..... | 907 | 26 | 135 | 198 | 219 | 174 | 96 | 39 | 21 |
| 30 to 34 years..... | 953 | 16 | 71 | 108 | 146 | 176 | 171 | 128 | 137 |
| 35 to 39 years..... | 878 | 12 | 45 | 62 | 82 | 108 | 125 | 129 | 316 |
| 40 to 44 years..... | 713 | 10 | 35 | 42 | 51 | 66 | 78 | 85 | 346 |
| 45 to 49 years..... | 558 | 9 | 31 | 34 | 39 | 48 | 55 | 60 | 282 |
| 50 years and over..... | 1,662 | 37 | 117 | 124 | 137 | 157 | 171 | 178 | 742 |

- Represents zero.

Z Less than 500.

[1]Excludes 392,486 women not reporting number of children ever born, a large proportion of whom probably had no children. The total shown includes 3,947 women of unknown age.

Note: For average numbers of children ever born based on the 1970 census, see table 9.

Source: Thailand NSO, 1973 table 7.

## Table 9. AVERAGE NUMBER OF CHILDREN EVER BORN PER EVER-MARRIED WOMEN BY AGE, FROM SELECTED SOURCES: 1970, 1974 TO 1975, AND 1975

| Age | 1970 | 1974 to 1975 | 1975 |
|---|---|---|---|
| All women, 15 years and over..... | 4.7 | 4.2 | [1]3.9 |
| 15 to 19 years..... | 0.7 | 0.6 | 0.7 |
| 20 to 24 years..... | 1.8 | 1.4 | 1.5 |
| 25 to 29 years..... | 3.0 | 2.6 | 2.6 |
| 30 to 34 years..... | 4.3 | 3.9 | 3.9 |
| 35 to 39 years..... | 5.5 | 5.1 | 5.0 |
| 40 to 44 years..... | 6.4 | 6.0 | 6.1 |
| 45 to 49 years..... | 6.5 | 6.4 | 6.8 |
| 50 years and over..... | [2]6.1 | [2]5.9 | (NA) |

NA Data not available.

[1]Refers to ever-married women 15 to 49 years of age.

[2]The relatively lower number of children per ever-married woman for the age group 50 and over may reflect a poorer quality of data rather than an actual lower level of fertility.

Source: The 1970 average numbers of children ever born are based on data from the 1970 census (Thailand NSO, 1973, table 6). Data for the period 1974 to 1975 are from the Survey of Population Change (Thailand NSO, 1976d, table 5). The 1975 data are reported by the Survey of Fertility in Thailand (Chulalongkorn University and Thailand NSO, 1977a, table 16).

## Table 10. DISTRIBUTION OF BIRTHS, BY ORDER OF BIRTH: 1973

(Figures do not add to total due to rounding)

| Birth order | Percent[1] |
|---|---|
| All orders..... | 100.0 |
| 1st birth..... | 27.1 |
| 2nd birth..... | 19.6 |
| 3rd birth..... | 14.8 |
| 4th birth..... | 11.5 |
| 5th birth..... | 8.6 |
| 6th birth..... | 6.4 |
| 7th birth..... | 4.6 |
| 8th birth..... | 3.1 |
| 9th birth..... | 1.9 |
| 10th birth and over..... | 2.3 |
| Median birth order..... | 2.7 |

[1]The base of the percentages is the number of births of known order.

Note: Based on incomplete registration of births, tabulated by year of registration rather than occurrence.

Source: United Nations, 1976a, table 25.

## Table 11. PERCENT DISTRIBUTION OF WOMEN AGES 15 TO 49 YEARS, BY MARITAL STATUS: 1975

(Figures may not add to totals due to rounding)

| Age | Total | Single | Married | Widowed | Divorced | Separated |
|---|---|---|---|---|---|---|
| All women, 15 to 49 years..... | 100.0 | 34.6 | 60.3 | 2.1 | 1.1 | 1.9 |
| 15 to 19 years..... | 100.0 | 84.6 | 14.4 | 0.1 | 0.2 | 0.6 |
| 20 to 24 years..... | 100.0 | 41.5 | 54.9 | 0.6 | 0.8 | 2.2 |
| 25 to 29 years..... | 100.0 | 19.2 | 76.7 | 0.9 | 1.2 | 2.0 |
| 30 to 34 years..... | 100.0 | 10.1 | 83.9 | 2.9 | 1.5 | 1.5 |
| 35 to 39 years..... | 100.0 | 6.4 | 86.6 | 2.2 | 2.2 | 2.6 |
| 40 to 44 years..... | 100.0 | 3.9 | 85.2 | 6.7 | 2.0 | 2.2 |
| 45 to 49 years..... | 100.0 | 3.3 | 84.0 | 7.1 | 1.7 | 4.0 |

Source: Derived from data reported by the Survey of Fertility in Thailand (Chulalongkorn University and Thailand NSO, 1977b, table 0.1.3).

## Table 12. MEASURES OF AGE AT MARRIAGE FOR WOMEN: 1975 AND 1976

| | |
|---|---|
| Minimum legal age at marriage: | |
| 1975..... | 15 years |
| 1976..... | 17 years |
| Age by which 25 percent have ever married, 1975..... | 19 years |
| Age by which 50 percent have ever married, 1975..... | 22 years |
| Age by which 75 percent have ever married, 1975..... | 26 years |

Source: Legal age at marriage for 1975 as established in 1955 is from Lee, 1971, p. 82. The minimum legal age at marriage was revised in 1976 according to the Revised Civil and Commercial Code of 1976 (Wanglee, 1977).

Percent of women ever married derived from data reported by the Survey of Fertility in Thailand (Chulalongkorn University and Thailand NSO, 1977b, table 0.1.3).

## Table 13. NUMBER OF NEW ACCEPTORS AND ACTIVE USERS OF CONTRACEPTION, AND USERS AS A PERCENT OF MARRIED WOMEN, AGES 15 TO 49 YEARS, BY METHOD, FOR SELECTED YEARS: 1965 TO 1976

(Figures may not add to totals due to rounding)

| Method | New acceptors (in thousands) | | | | | | | | | Active users | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Number (in thousands) | | | Percent of married women | |
| | 1965 to 1968[1] | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1974 | 1975 | 1976 | 1975 | 1976 |
| All methods | 186.9 | 130.2 | 225.4 | 407.5 | 456.7 | 420.6 | 544.1 | 527.6 | 611.5 | 1,059.7 | 1,278.0 | 1,454.6 | 21.6 | 23.8 |
| Oral contraceptives | 17.9 | 60.5 | 132.4 | 294.6 | 327.6 | 267.5 | 298.4 | 323.0 | 364.6 | 422.0 | 476.4 | 552.6 | 8.0 | 9.1 |
| IUD's | 121.5 | 54.5 | 74.4 | 86.0 | 90.1 | 94.1 | 87.3 | 73.7 | 71.0 | 305.8 | 349.8 | 315.7 | 5.9 | 5.2 |
| Condoms | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | [2]77.2 | [2]15.4 | (NA) | 19.6 | 41.[illegible] | (NA) | 0.7 | (NA) |
| Sterilization: | | | | | | | | | | | | | | |
| Male | 47.6 | 15.3 | 18.6 | 0.6 | 1.3 | 2.5 | 6.7 | 7.4 | 10.0 | 17.9 | 25.3 | 35.3 | 0.4 | 0.6 |
| Female | | | | 22.7 | 31.4 | 46.9 | 71.8 | 81.7 | 93.6 | 264.6 | 346.3 | 439.9 | 5.9 | 7.2 |
| Other | (NA) | (NA) | (NA) | 3.6 | 6.3 | 9.6 | 12.7 | 26.4 | 72.3 | 29.7 | 38.7 | 111.1 | 0.7 | 1.8 |

NA Data not available.

[1]Data for 1965 to 1968 are approximate, since official reporting was not formally established until mid-1968.
[2]Data were reported for only two quarters during the year.

Source: New acceptor data for 1965 to 1972 are from Thailand MPHFHD, no date, tables 2 and 3, and U.S. Bureau of the Census, 1975, p. 44; and for 1973 from U.S. Bureau of the Census, 1975, p. 44, and Nortman and Hofstatter, 1976, p. 65. New acceptor and active user data for 1974 to 1975 are from U.S. Agency for International Development, no date a, p. 40, and no date b, p. 43; and for 1976 unpublished data from the Family Planning Services Division, Office of Population, Development Support Bureau, U.S. Agency for International Development. Married women for 1975 and 1976 were estimated at the U.S. Bureau of the Census by applying the percent of women ages 15 to 49 years, who were married in 1975 (table 11) to the projected number of total women in the same ages for 1975 and 1976 (table 6).

## Table 14. PERCENT LITERATE AGES 15 YEARS AND OVER, BY SEX: 1970

| Age | Both sexes | Male | Female |
|---|---|---|---|
| Total, 15 years and over. | 78.7 | 87.3 | 70.5 |
| 15 to 24 years..... | 93.7 | 95.5 | 92.0 |
| 25 to 34 years..... | 87.5 | 91.9 | 83.2 |
| 35 years and over..... | 62.1 | 78.3 | 46.7 |

Note: Literacy is defined as the ability to read and write simple statements in any language. Percentages are based on total population figures excluding 21,651 males and 21,826 females of unknown age of which 6,113 males and 4,863 females were literate.

Source: Thailand NSO, 1973, table 12.

## Table 15. PERCENT OF POPULATION, AGES 6 TO 19 YEARS, ENROLLED IN SCHOOL, BY SEX: 1970

| Age | Both sexes | Male | Female |
|---|---|---|---|
| Total, 6 to 19 years..... | 44.5 | 47.2 | 41.7 |
| 6 to 9 years..... | 65.3 | 65.8 | 64.8 |
| 10 to 14 years..... | 51.6 | 55.8 | 47.3 |
| 15 to 19 years..... | 12.5 | 15.2 | 9.9 |

Note: Enrollment is defined as attendance, as of January 1, 1970 or during the 1969 to 1970 academic year, at regular academic schools, at vocational schools teaching regular academic courses, and at colleges and universites.

Source: Thailand NSO, 1973, table 13.

## Table 16. PERCENT OF POPULATION, AGES 15 YEARS AND OVER, WHO HAVE COMPLETED SCHOOL, BY LEVEL AND SEX: 1970

| Age | Percent who have completed at least | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Primary school | | | | | | Secondary school | | | Higher level | | |
| | Grade 4 | | | Grade 7 and vocational | | | | | | | | |
| | Both sexes | Male | Female | Both sexes | Male | Female | Both sexes | Male | Female | Both sexes | Male | Female |
| Total, 15 years and over..... | 67.7 | 74.3 | 61.4 | 9.9 | 12.9 | 7.1 | 2.7 | 3.4 | 2.0 | 1.0 | 1.3 | 0.7 |
| 15 to 24 years..... | 88.6 | 90.4 | 86.8 | 15.9 | 18.8 | 13.2 | 3.2 | 3.4 | 2.9 | 0.8 | 0.9 | 0.8 |
| 25 to 34 years..... | 77.8 | 82.5 | 73.2 | 10.2 | 13.9 | 6.7 | 3.8 | 4.8 | 2.9 | 1.5 | 1.9 | 1.1 |
| 35 years and over..... | 45.2 | 56.5 | 34.6 | 4.9 | 7.5 | 2.4 | 1.6 | 2.5 | 0.8 | 0.9 | 1.3 | 0.4 |

Note: Primary education is defined as grades (Pratom) 1 through 7 and primary vocational training; secondary education as levels (Maw Saw) 1 through 5 and secondary vocational and teacher training; and higher education as general, vocational, and teacher training at the university level. Thailand began to extend compulsory education from 4 to 7 years of schooling in 1963. The expansion of compulsory education was to be brought about gradually depending on the resources and readiness of each locality; by the period 1972 to 1975, 41 percent of all communes had implemented 7 years of compulsory education (Wanglee, 1977). Therefore, primary schooling is presented in the categories of completed grade 4 and completed grade 7 and vocational primary. Percentages are based on populations of known age group and known grade within level excluding persons classified as having completed "other education" and persons of unknown educational level: 38,902 males and 28,112 females ages 15 to 24; 48,600 males and 33,474 females ages 25 to 34; and 180,936 males and 97,173 females ages 35 and over.

Source: Thailand NSO, 1973, table 15.

## Table 17. PERCENT OF THE CIVILIAN NONINSTITUTIONAL POPULATION ECONOMICALLY ACTIVE, BY AGE AND SEX: 1975

| Age | Male | Female |
|---|---|---|
| Total, 11 years and over..... | 70.7 | 51.8 |
| 11 to 14 years..... | 15.8 | 17.1 |
| 15 to 19 years..... | 54.8 | 55.0 |
| 20 to 24 years..... | 79.3 | 64.9 |
| 25 to 29 years..... | 91.9 | 63.6 |
| 30 to 34 years..... | 95.2 | 63.9 |
| 35 to 39 years..... | 96.7 | 64.4 |
| 40 to 49 years..... | 96.5 | 65.5 |
| 50 to 59 years..... | 93.1 | 58.9 |
| 60 years and over..... | 55.9 | 23.6 |

Note: Data are based on an average of results from the January to March and July to September rounds of the 1975 Labor Force Survey. The economically active population is defined as all persons 11 years of age and over who, during a one-week period preceding the survey: worked for some form of payment; did not work but had jobs from which they were temporarily absent; did not work but were looking for work; did not work and were not looking for work because they were awaiting reassignment or recall, they were ill, or because they believed no work was available; and unpaid family workers who worked at least 20 hours during the survey week or who worked less than 20 hours but wanted to work more. (See appendix table A-7 for the percent of the population economically active based on results from the 1970 census.)

Source: Thailand NSO, 1976b, tables 2, 4, 15-A, and 15-B; and 1976c, tables 2, 4, 15-A, and 15-B.

## Table 18. DISTRIBUTION OF THE CIVILIAN LABOR FORCE, BY SEX AND INDUSTRY: 1975

(Figures may not add to totals due to rounding)

| Industry | Both sexes | Male | Female |
|---|---|---|---|
| PERCENT[1] | | | |
| All industries | 100.0 | 100.0 | 100.0 |
| Agriculture, forestry, hunting and fishing | 66.6 | 65.7 | 67.8 |
| Mining and quarrying | 0.2 | 0.2 | 0.2 |
| Manufacturing | 10.2 | 9.9 | 10.7 |
| Construction, repair and demolition | 1.4 | 2.4 | 0.2 |
| Electricity, gas, water and sanitary services | 0.3 | 0.4 | 0.1 |
| Commerce | 9.1 | 7.8 | 10.9 |
| Transport, storage and communication | 2.5 | 4.1 | 0.3 |
| Services | 9.7 | 9.5 | 9.9 |
| NUMBER (in thousands) | | | |
| Total classified workers | 16,176 | 9,205 | 6,971 |
| Workers not classified by industry[2] | 67 | 47 | 20 |
| Total civilian labor force | 16,243 | 9,252 | 6,991 |

[1]The base of the percentages is the total classified workers.
[2]Includes 46,895 male and 29,755 female unemployed workers.

Note: Data are based on an average of results from the January to March and July to September rounds of the 1975 Labor Force Survey. See appendix table A-8 for the distribution of the labor force based on results from the 1970 census.

Source: Thailand NSO, 1976b, tables 7-A, 7-B, 15-A, and 15-B; and 1976c, tables 7-A, 7-B, 15-A, and 15-B.

## Table 19. DISTRIBUTION OF THE CIVILIAN LABOR FORCE, BY SEX AND OCCUPATION: 1975

(Figures may not add to totals due to rounding)

| Occupation | Both sexes | Male | Female |
|---|---|---|---|
| PERCENT[1] | | | |
| All occupations | 100.0 | 100.0 | 100.0 |
| Professional, technical and related workers | 2.5 | 2.3 | 2.8 |
| Administrative, executive and managerial workers | 0.8 | 1.3 | 0.2 |
| Clerical workers | 1.5 | 1.7 | 1.3 |
| Sales workers | 9.8 | 7.7 | 12.7 |
| Farmers, fishermen, hunters, loggers, miners, quarrymen and related workers | 66.6 | 65.7 | 67.9 |
| Workers in transport and communication | 2.6 | 4.5 | 0.2 |
| Craftsmen, production-process workers and laborers not classified elsewhere | 13.1 | 14.2 | 11.5 |
| Service, sport and recreation workers | 3.0 | 2.6 | 3.4 |
| NUMBER (in thousands) | | | |
| Total classified workers | 16,188 | 9,216 | 6,973 |
| Workers not classified by occupation[2] | 55 | 36 | 19 |
| Total civilian labor force | 16,243 | 9,252 | 6,991 |

[1]The base of the percentages is the total classified workers.
[2]Includes 36,060 male and 18,505 female new workers.

Note: Data are based on an average of results from the January to March and the July to September rounds of the 1975 Labor Force Survey. See appendix table A-9 for the distribution of the labor force based on results from the 1970 census.

Source: Thailand NSO, 1976b, tables 6-A, 6-B, 18-A, and 18-B; and 1976c, tables 6-A, 6-B, 18-A, and 18-B.

## Table 20. DISTRIBUTION OF CIVILIAN AGRICULTURAL AND NONAGRICULTURAL WORKERS, BY SEX AND STATUS: 1975

(Figures may not add to totals due to rounding)

| Status | Both sexes | | Male | | Female | |
|---|---|---|---|---|---|---|
| | Agricultural | Nonagricultural | Agricultural | Nonagricultural | Agricultural | Nonagricultural |
| PERCENT[1] | | | | | | |
| Total civilian labor force..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Employers..... | 0.2 | 1.1 | 0.2 | 1.6 | 0.1 | 0.4 |
| Workers on own account..... | 41.0 | 32.2 | 61.3 | 31.5 | 15.2 | 33.2 |
| Salaried employees and wage earners..... | 5.3 | 52.8 | 5.3 | 60.2 | 5.3 | 42.6 |
| Unpaid family workers..... | 53.5 | 13.8 | 33.2 | 6.7 | 79.5 | 23.9 |
| NUMBER (in thousands) | | | | | | |
| Total classified workers..... | 10,776 | 5,400 | 6,051 | 3,154 | 4,725 | 2,246 |
| Workers not classified by status[2]..... | - | 67 | - | 47 | - | 20 |
| Total civilian labor force..... | 10,776 | 5,467 | 6,051 | 3,201 | 4,725 | 2,266 |

- Represents zero.

[1]The base of percentages is the total classified workers.
[2]Includes 46,895 male and 19,755 female unemployed workers.

Note: Data are based on an average of results from the January to March and July to September rounds of the 1975 Labor Force Survey. See appendix table A-10 for the distribution of the labor force based on results from the 1970 census.

Source. Thailand NSO, 1976b, tables 7-A, 7-B, 15-A, and 15-B; and 1976c, tables 7-A, 7-B, 15-A, and 15-B.

## Table 21. PERCENT DISTRIBUTION OF HOUSEHOLDS, BY NUMBER OF PERSONS: 1970

(Figures do not add to total due to rounding)

| Persons per household | Percent |
|---|---|
| All households | 100.0 |
| 1 person | 3.2 |
| 2 persons | 6.9 |
| 3 persons | 11.0 |
| 4 persons | 13.8 |
| 5 persons | 14.8 |
| 6 persons | 14.4 |
| 7 persons | 12.3 |
| 8 persons | 9.3 |
| 9 persons | 6.2 |
| 10 persons and over | 8.2 |
| OTHER HOUSEHOLD MEASURES | |
| Number of households | 5,908,473 |
| Mean number of persons per household | 5.7 |
| Median number of persons per household | 5.5 |

Note: Data refer to private households defined as one-person households ("a person who makes provisions for his own food or other essentials for living without combining with any other person co form part of a multi-person household") and multi-person households (comprised of two or more persons "related or unrelated, living together in a whole or part of a house who make common provisions for food or other essentials for living"). Percentages are based on figures excluding 524,797 persons living in non-private households.

Source: Thailand NSO, 1973, p.XV and table 2.

## Table 22. SELECTED URBAN MEASURES: 1970

| | |
|---|---|
| Urban areas[1]: | |
| Population | 4,533,100 |
| Percent of country's total population | 13.2 |
| Cities with 100,000 inhabitants or more: | |
| Number of cities | [2]2 |
| Population | 2,495,312 |
| Percent of country's total population | 7.3 |
| Cities with 20,000 inhabitants or more: | |
| Number of cities | 37 |
| Population | 3,685,087 |
| Percent of country's total population | 10.7 |

[1]The data for urban areas relate to the Thai concept of "municipal areas." These are comprised of Nakhon (cities) of at least 50,000 persons with a density of at least 3,000 persons per square kilometer and sufficient tax revenues to execute municipal affairs, Muang (towns) of at least 10,000 persons with a density of at least 3,000 persons per square kilometer or where an administrative seat is located and revenues supply sufficient tax to execute municipal affairs, and Tambon (communes) established as deemed appropriate without regard to size.

[2]The two cities with 100,000 inhabitants or more (Bangkok and Thonburi) were combined shortly after the 1970 census into one metropolitan area.

Source: Thailand NSO, 1973, tables 1A and 1B.

## Table 23. CHANGWAT POPULATION, GROWTH RATES, AND MIGRATION DATA

| Region and changwat | 1960 population (in thousands) | 1970 population (in thousands) | 1970 population born outside changwat (percent) | Annual growth rate 1960 to 1970 (percent) |
|---|---|---|---|---|
| CENTRAL REGION | | | | |
| Ang Thong | 198 | 217 | 7.8 | 0.9 |
| Chachoengsao | 323 | 355 | 8.1 | 1.0 |
| Chai Nat | 245 | 262 | 9.5 | 0.6 |
| Chanthaburi | 158 | 216 | 16.0 | 3.2 |
| Chon Buri | 392 | 542 | 26.1 | 3.3 |
| Kanchanaburi | 233 | 329 | 21.0 | 3.5 |
| Lop Buri | 336 | 464 | 25.2 | 3.3 |
| Nakhon Nayok | 154 | 163 | 6.9 | 0.6 |
| Nakhon Pathom | 370 | 419 | 9.8 | 1.2 |
| Nonthaburi | 196 | 269 | 27.0 | 3.2 |
| Pathum Thani | 190 | 234 | 15.2 | 2.1 |
| Phetchaburi | 238 | 290 | 7.9 | 2.0 |
| Phra Nakhon | 1,577 | 2,157 | 35.2 | 3.2 |
| Phra Nakhon Si Ayutthaya | 479 | 502 | 7.2 | 0.5 |
| Prachin Buri | 335 | 424 | 12.1 | 2.4 |
| Prachuap Khiri Khan | 152 | 249 | 34.1 | 5.0 |
| Ratchaburi | 411 | 483 | 11.2 | 1.6 |
| Rayong | 148 | 251 | 30.6 | 5.3 |
| Samut Prakan | 235 | 329 | 24.8 | 3.4 |
| Samut Sakhon | 166 | 200 | 10.3 | 1.9 |
| Samut Songkhram | 162 | 163 | 7.5 | (Z) |
| Saraburi | 304 | 353 | 18.2 | 1.5 |
| Sing Buri | 154 | 165 | 8.2 | 0.7 |
| Suphan Buri | 491 | 562 | 5.3 | 1.4 |
| Thon Buri | 559 | 920 | 46.3 | 5.0 |
| Trat | 66 | 94 | 19.4 | 3.5 |
| NORTHEASTERN REGION | | | | |
| Buri Ram | 584 | 800 | 16.0 | 3.2 |
| Chaiyaphum | 486 | 632 | 11.3 | 2.6 |
| Kalasin | 427 | 571 | 5.7 | 2.9 |
| Khon Kaen | 844 | 1,049 | 9.3 | 2.2 |
| Loei | 211 | 325 | 14.9 | 4.4 |
| Maha Sarakham | 499 | 613 | 3.5 | 2.1 |
| Nakhon Phanom | 436 | 565 | 6.4 | 2.6 |
| Nakhon Ratchasima | 1,095 | 1,494 | 11.3 | 3.1 |
| Nong Khai | 257 | 444 | 30.9 | 5.5 |
| Roi Et | 668 | 785 | 3.0 | 1.6 |
| Sakon Nakhon | 427 | 598 | 12.2 | 3.4 |
| Si Sa Ket | 601 | 796 | 4.9 | 2.8 |
| Surin | 582 | 755 | 4.7 | 2.6 |
| Ubon Ratchathani | 1,131 | 1,485 | 4.0 | 2.7 |
| Udon Thani | 744 | 1,113 | 23.6 | 4.1 |
| NORTHERN REGION | | | | |
| Chiang Mai | 798 | 1,026 | 6.8 | 2.5 |
| Chiang Rai | 812 | 1,112 | 11.5 | 3.2 |
| Kamphaeng Phet | 173 | 340 | 44.6 | 6.8 |
| Lampang | 472 | 583 | 4.5 | 2.1 |
| Lamphun | 250 | 311 | 3.8 | 2.2 |

## Table 23. CHANGWAT POPULATION, GROWTH RATES, AND MIGRATION DATA--Continued

| Region and changwat | 1960 population (in thousands) | 1970 population (in thousands) | 1970 population born outside changwat (percent) | Annual growth rate 1960 to 1970 (percent) |
|---|---|---|---|---|
| NORTHERN REGION--Con. | | | | |
| Mae Hong Son | 81 | 104 | 7.6 | 2.6 |
| Nakhon Sawan | 648 | 759 | 18.1 | 1.6 |
| Nan | 240 | 311 | 3.2 | 2.6 |
| Phetchabun | 320 | 525 | 32.3 | 5.0 |
| Phichit | 389 | 440 | 13.4 | 1.2 |
| Phitsanulok | 352 | 492 | 17.4 | 3.4 |
| Phrae | 299 | 366 | 3.7 | 2.0 |
| Sukhothai | 316 | 402 | 10.5 | 2.4 |
| Tak | 168 | 217 | 9.0 | 2.6 |
| Uthai Thani | 146 | 178 | 10.8 | 2.0 |
| Uttaradit | 260 | 323 | 9.2 | 2.2 |
| SOUTHERN REGION | | | | |
| Chumphon | 175 | 235 | 15.0 | 3.0 |
| Krabi | 94 | 149 | 15.9 | 4.7 |
| Nakhon Si Thammarat | 730 | 929 | 4.5 | 2.4 |
| Narathiwat | 266 | 327 | 9.3 | 2.1 |
| Pattani | 282 | 330 | 5.9 | 1.6 |
| Phangnga | 93 | 135 | 16.7 | 3.8 |
| Phatthalung | 234 | 305 | 8.6 | 2.7 |
| Phuket | 76 | 100 | 16.2 | 2.8 |
| Ranong | 38 | 59 | 28.0 | 4.6 |
| Satun | 70 | 117 | 23.2 | 5.2 |
| Songkhla | 500 | 622 | 9.8 | 2.2 |
| Surat Thani | 325 | 437 | 13.4 | 3.0 |
| Trang | 240 | 327 | 8.9 | 3.1 |
| Yala | 149 | 199 | 27.3 | 2.9 |

Z Less than 0.05 percent.

Source: Thailand NSO, 1962, table 1; and 1973, table 8A.

## Table 24. PERSONS OF FOREIGN CITIZENSHIP, BY COUNTRY: 1970

| Country of citizenship | Numbers of persons |
|---|---|
| All countries | 375,372 |
| China | 311,092 |
| Vietnam, Laos, and Khmer Republic | 29,38[illegible] |
| Burma, India, Pakistan, and Sri Lanka | 14,002 |
| European countries, Australia, and New Zealand | 6,147 |
| United States and Canada | 4,158 |
| Malaysia and Singapore | 3,894 |
| All other | 6,690 |
| Population of foreign citizenship as percent of total population | 1.1 |

Note: Citizenship refers to the legal nationality of each person as of the census date.

Source: Thailand NSO, 1973, table 10.

## Table 25. SELECTED SOCIAL AND ECONOMIC ITEMS

| Item | Year | Number or rate |
|---|---|---|
| Total area | 1974 | 51,400,000 hectares |
| Agricultural area[1] | 1974 | 14,408,000 hectares |
| Daily newspaper circulation | 1973 | 33 per 1,000 population |
| Number of radio receivers | 1973 | 76 per 1,000 population |
| Number of television receivers | 1972 | 7 per 1,000 population |

[1]Includes arable land, land under permanent crops, and permanent meadows and pastures.

Source: Total area and agricultural area from Food and Agriculture Organization, 1976, table 1. Other items from United Nations, 1976b, tables 216 and 218.

## Appendix

### Table A-1. CENSUS POPULATION, BY AGE AND SEX: APRIL 1970

(In thousands. Figures may not add to totals due to rounding)

| Age | Both sexes | Male | Female |
|---|---|---|---|
| All ages | 34,397 | 17,124 | 17,274 |
| 0 to 4 years | 5,659 | 2,863 | 2,796 |
| 5 to 9 years | 5,285 | 2,679 | 2,606 |
| 10 to 14 years | 4,562 | 2,310 | 2,253 |
| 15 to 19 years | 3,718 | 1,832 | 1,885 |
| 20 to 24 years | 2,683 | 1,322 | 1,362 |
| 25 to 29 years | 2,241 | 1,098 | 1,143 |
| 30 to 34 years | 2,124 | 1,047 | 1,077 |
| 35 to 39 years | 1,911 | 953 | 958 |
| 40 to 44 years | 1,541 | 774 | 766 |
| 45 to 49 years | 1,197 | 599 | 597 |
| 50 to 54 years | 962 | 472 | 490 |
| 55 to 59 years | 790 | 388 | 402 |
| 60 to 64 years | 625 | 301 | 324 |
| 65 to 69 years | 452 | 213 | 239 |
| 70 to 74 years | 297 | 129 | 168 |
| 75 to 79 years | 169 | 70 | 98 |
| 80 years and over | 139 | 51 | 88 |
| Unknown | 43 | 22 | 22 |

Source: Thailand NSO, 1973, tables 3 and 4.

## Table A-2. ESTIMATED AND PROJECTED TOTAL AND AGE-SPECIFIC FERTILITY RATES: 1970 AND 1976

| Age | Estimated 1970 | Projected 1976 | | |
|---|---|---|---|---|
| | | High series | Intermediate series | Low series |
| Age-specific fertility rates (per 1,000 women) | | | | |
| 15 to 19 years | 73 | 84 | 86 | 87 |
| 20 to 24 years | 248 | 249 | 254 | 259 |
| 25 to 29 years | 293 | 252 | 246 | 238 |
| 30 to 34 years | 246 | 199 | 186 | 171 |
| 35 to 39 years | 188 | 148 | 135 | 119 |
| 40 to 44 years | 105 | 73 | 66 | 56 |
| 45 to 49 years | 22 | 14 | 12 | 10 |
| Total fertility rate (per woman) | 5.87 | 5.10 | 4.92 | 4.70 |

Source: For a detailed discussion of the estimated level and pattern of fertility in 1970, see table 7. The projected estimates assume that the total fertility rate (TFR) in 1970 declined by 13 percent in the high series. This change is based on the acceptance of the 1974 to 1975 TFR reported in the Survey of Population Change (see appendix table A-3) and the assumption that the rate of decline between 1975 and 1976 would be 75 percent of the average annual rate of decline exhibited by the 1970 estimated TFR and the 1974 to 1975 TFR reported in the Survey of Population Change. The medium projection series assumes that the 1970 TFR declined by 16 percent. This assumes an acceleration of the estimated decline in the TFR's between the 1964 to 1965 period and 1970 (see table 7). The low projection series assumes that the 1970 TFR declined by 20 percent. This change takes into consideration results from the Survey of Fertility in Thailand (see appendix table A-3), and official national projection series (Thailand NSO, 1976a).

Age-specific fertility rates for 1976, regardless of series, were linearly interpolated between the 1974 to 1975 Survey of Population Change age-specific fertility rates (see appendix table A-3) and age-specific fertility rates derived by applying the United Nations low fertility, early peak pattern (United Nations, 1965, table 7.6) to a TFR of 3.90. It was assumed that the change in the age-specific fertility rates was linearly related to the change in TFR's for the specified period. The TFR of 3.90 represents and assumed level of fertility in the year 2000 for the high projection series based on a 25 percent reduction of the TFR reported in the 1974 to 1975 Survey of Population Change (see appendix table A-3). The United Nations pattern was selected after considering the change in the estimated patterns of fertility for 1960, 1964 to 1965, 1970, and 1974 to 1975 (see table 3 and appendix table A-3).

## Table A-3. ALTERNATE ESTIMATES OF TOTAL AND AGE-SPECIFIC FERTILITY RATES FROM SELECTED SOURCES: SELECTED PERIODS, 1960 TO 1975

| Age | 1960 census (estimated from children ever born) | 1970 census (own-children method) | | Survey of Fertility in Thailand[1] | | Thai Longitudinal Study | | Survey of Population Change |
|---|---|---|---|---|---|---|---|---|
| | | 1960 to 1964 | 1965 to 1969 | 1965 to 1969 | 1970 to 1974 | 1968 to 1969 | 1971 to 1972 | 1974 to 1975 |
| Age-specific fertility rates (per 1,000 women)..... | | | | | | | | |
| 15 to 19 years..... | 69 | 86 | 89 | 70 | 70 | 72 | 71 | 84 |
| 20 to 24 years..... | 221 | 274 | 267 | 250 | 220 | 256 | 229 | 247 |
| 25 to 29 years..... | 314 | 313 | 299 | 290 | 220 | 286 | 287 | 254 |
| 30 to 34 years..... | 304 | 281 | 260 | 260 | 180 | 229 | 178 | 204 |
| 35 to 39 years..... | 242 | 215 | 206 | 210 | 170 | 198 | 166 | 154 |
| 40 to 44 years..... | 131 | 106 | 100 | 150 | 80 | 152 | 123 | 76 |
| 45 to 49 years..... | 47 | 20 | 19 | 20 | 30 | 29 | 14 | 14 |
| Total fertility rate (per woman)..... | 6.63 | 6.48 | 6.19 | 6.25 | 4.85 | 6.11 | 5.34 | 5.17 |

[1]Preliminary results.

Note: Benchmark estimates of total and age-specific fertility rates are given in table 7.

Source: Rates for 1960 are based on an analysis of data on children ever born from the 1960 census as reported by Das Gupta, et al. (1965, table 8). The 1960 to 1964 and 1965 to 1969 rates are based on an application of the own-children method to 1970 census data (Arnold, 1978). Preliminary rates for the periods 1965 to 1969 and 1970 to 1974 are from the Survey of Fertility in Thailand (Chulalongkorn University and Thailand NSO, 1977a, table 22). The period rates for 1968 to 1969 and 1971 to 1972 were derived at the U.S. Bureau of the Census from age-specific marital fertility rates for [illegible]le Kingdom as reported by the Thai Longitudinal Study (see appendix table A-4), and the proportion of female[illegible]ntly married, by age, from the 1970 census. Rates for the period 1974 to 1975 are from the Survey of Population Change (Thailand NSO, 1976d, table 4).

A comparison of the rates estimated by Das Gupta, et al. (see above) and rates estimated by the Brass technique (see table 7), indicated a close agreement as to the level and pattern of fertility in 1960. A comparison of the level and pattern of fertility estimated by the own-children method with those estimated by Das Gupta, et al., the Brass technique, the 1964 to 1965 Survey of Population Change (see table 7), the 1965 to 1969 estimates from the Survey of Fertility in Thailand (see above), and the 1968 to 1969 rounds of the Thai Longitudinal Study (see above) showed a high degree of consistency between the 1960 to 1964 and 1965 to 1969 period rates from the own-children method and those from the various other sources.

The March to June 1975 Survey of Fertility in Thailand (World Fertility Survey) was conducted jointly by the Institute of Population Studies, Chulalongkorn University and the National Statistical Office. The preliminary results shown above from the Survey of Fertility in Thailand (SOFT) for the period 1965 to 1969 were consistent with the fertility estimates from the 1964 to 1965 Survey of Population Change (SPC) and the 1968 to 1969 rounds of the Thai Longitudinal Study (TLS). However, the SOFT estimates of fertility for the period 1970 to 1974 were inconsistent with estimates from the 1971 to 1972 rounds of the TLS and the 1974 to 1975 SPC (see above). Because of these inconsistencies and the unavailability of detailed tabulations from the SOFT at the time this profile was prepared, the results from the SOFT for the period 1970 to 1974 were not accepted as benchmark estimates, although they were taken into consideration in setting the lower bound for the 1976 projected estimate of fertility (see table 3 and appendix table A-2).

The TLS, conducted during the periods April 1969 to May 1970 and April 1972 to May 1973 by the Institute of Population Studies, Chulalongkorn University, reported age-specific marital fertility rates for the rural, provincial urban, and Bangkok-Thonburi sectors of the population for the periods 1968 to 1969 and 1971 to 1972 (see appendix table A-4 for national level rates). Although approximately 40 percent of the women interviewed in the first rounds of the TLS were lost to follow-up in the second rounds (being replaced by "new respondents"), and differences were found between the characteristics of the reinterviewed women and those lost to follow-up (second rounds), the results from the weighting procedure used to derive age-specific fertility rates for 1970 (see table 7) were consistent with the trend in fertility exhibited by the two SPC's and were accepted. The general pattern of fertility from the TLS, with minor adjustments, was also accepted for 1970 (see table 7).

During the period November 1964 to June 1967 the National Statistical Office of Thailand, in conjunction with the Ministries of Interior and Public Health, conducted a multi-round Survey of Population Change (SPC) to assess the quality of vital registration. A second SPC was begun in July 1974 and data are currently available for the first four rounds to June 1975. Both of the SPC's utilized a dual record system procedure to estimate the number of births by age of mother. It should be noted that the area of Bangkok-Thonburi was excluded from the earlier survey; thus, the reported rates may overstate actual levels of fertility for the whole kingdom. A comparison of results obtained from an analysis of various data sources shown above and in table 7 and the results obtained from the November 1964 to December 1965 rounds of the SPC, indicated that the latter were accepted as accurately portraying the level and pattern of fertility for the 1964 to 1965 period (see table 7). Furthermore, the results from the 1974 to 1975 SPC accurately portrayed the pattern of fertility for this time period and the level was accepted as the upper bound for the 1975 projected estimate of fertility.

## Table A-4. WEIGHTED AGE-SPECIFIC MARITAL FERTILITY RATES REPORTED BY THE THAI LONGITUDINAL STUDY: 1968 TO 1969 AND 1971 TO 1972

(Rates per 1,000 married women)

| Age | 1968 to 1969 | 1971 to 1972 |
|---|---|---|
| 15 to 19 years | 412 | 408 |
| 20 to 24 years | 442 | 395 |
| 25 to 29 years | 361 | 362 |
| 30 to 34 years | 267 | 207 |
| 35 to 39 years | 228 | 191 |
| 40 to 44 years | 180 | 145 |
| 45 to 49 years | 36 | 18 |

Note: The weighting of the rural sample of women was 7 times that of the urban sample of women. For a discussion of the weighting scheme used by the U.S. Bureau of the Census to derive age-specific fertility rates, see notes to table 7.

Source: Knodel and Pitaktepsombati, 1975, table 10.

## Table A-5. ESTIMATED AND PROJECTED LIFE EXPECTANCY AT BIRTH, BY SEX: 1960, 1970, AND 1976

| Year | Both sexes | Male | Female |
|---|---|---|---|
| Estimated | | | |
| 1960 | 55 | 54 | 56 |
| 1970 | 58 | 56 | 60 |
| Projected | | | |
| 1976 | 59 | 57 | 61 |

Source: See notes to tables 1 and 4.

## Table A-6. REPORTED INFANT MORTALITY RATE AND LIFE EXPECTANCY AT BIRTH, BY SEX, FROM THE SURVEY OF POPULATION CHANGE: 1964 TO 1965 AND 1974 TO 1975

| Period | Infant deaths per 1,000 live births | Life expectancy at birth | | |
|---|---|---|---|---|
| | | Both sexes | Male | Female |
| 1964 to 1965 | 84 | 59 | 56 | 62 |
| 1974 to 1975 | 56 | 61 | 58 | 64 |

Source: Infant mortality rates as reported in Thailand NSO, 1976d, table 11. The 1964 to 1965 male and female life expectancies at birth are from unpublished, revised Survey of Population Change life tables (Arnold, 1977). The 1974 to 1975 male and female life expectancies at birth are from revised Survey of Population Change life tables (Wanglee, 1977). Life expectancy at birth for both sexes was derived from male and female life tables and reported sex ratios at birth of 1.055 and 1.061 for 1964 to 1965 and 1974 to 1975, respectively.

During the period November 1964 to June 1967 the National Statistical Office of Thailand, in conjunction with the Ministries of Interior and Public Health, conducted a multi-round Survey of Population Change (SPC) to assess the quality of vital registration. A second SPC was begun in July 1974 and data are currently available for the first four rounds to June 1975. Both of the SPC's utilized a dual record system procedure to estimate the number of deaths by age and sex. It should be noted that the area of Bangkok-Thonburi was excluded from the earlier survey; thus, the reported rates may overstate actual levels of mortality for the whole kingdom.

Mortality levels from both SPC's were compared with levels for 1960 and 1970 obtained from a graphic stable population technique (see table 4 and appendix table A-5). This comparison indicated that the levels of mortality from both SPC's were higher, and that the sex differentials in life expectancy at birth were wider than expected. Consequently, the estimates derived from the graphic stable population technique were accepted for 1960 and 1970 (see table 4). The pattern of mortality observed in the 1964 to 1965 SPC (adjusted by the logit technique) was accepted as the 1960 pattern of mortality. The 1970 pattern was based on the change observed between the patterns from the 1964 to 1965 and 1974 to 1975 SPC's, adjusted by the logit technique.

## Table A-7. PERCENT OF POPULATION ECONOMICALLY ACTIVE, BY AGE AND SEX: 1970

| Age | Male[1] | Female[2] |
|---|---|---|
| Total, 11 years and over..... | 81.5 | 71.1 |
| 11 to 14 years..... | 44.6 | 52.0 |
| 15 to 19 years..... | 78.3 | 78.4 |
| 20 to 24 years..... | 90.1 | 80.3 |
| 25 to 29 years..... | 96.4 | 79.8 |
| 30 to 34 years..... | 97.3 | 80.0 |
| 35 to 39 years..... | 97.5 | 81.4 |
| 40 to 44 years..... | 97.4 | 81.6 |
| 45 to 49 years..... | 97.0 | 81.3 |
| 50 to 54 years..... | 94.4 | 74.9 |
| 55 to 59 years..... | 90.1 | 66.9 |
| 60 to 64 years..... | 75.5 | 48.3 |
| 65 years and over..... | 45.2 | 21.5 |

[1]Percentages are based on total population figures excluding 145,952 males for whom economic activity status was not reported and 2,904 economically active and 1,566 noneconomically active males for whom age was not reported.

[2]Percentages are based on total population figures excluding 207,909 females for whom economic activity status was not reported and 2,367 economically active and 1,612 noneconomically active females for whom age was not reported.

Note: Data are based on results from the 1970 census of population. The economically active population is defined as all persons 11 years of age and over who were employed on the census date, or who had worked on any day during the week preceding the census date, as well as experienced and new workers looking for work and those waiting for the farm season.

Source: Thailand NSO, 1973, table 16.

## Table A-8. DISTRIBUTION OF THE LABOR FORCE, BY SEX AND INDUSTRY: 1970

(Figures may not add to totals due to rounding)

| Industry | Both sexes | Male | Female |
|---|---|---|---|
| PERCENT[1] | | | |
| All industries | 100.0 | 100.0 | 100.0 |
| Agriculture, forestry, hunting and fishing | 80.0 | 76.5 | 83.9 |
| Mining and quarrying | 0.5 | 0.7 | 0.3 |
| Manufacturing | 4.1 | 4.5 | 3.7 |
| Construction | 1.1 | 1.8 | 0.3 |
| Electricity, gas, water, and sanitary services | 0.2 | 0.3 | (Z) |
| Commerce | 5.3 | 4.6 | 6.0 |
| Transport, storage, and communication | 1.6 | 2.9 | 0.2 |
| Services | 7.2 | 8.7 | 5.5 |
| NUMBER (in thousands) | | | |
| Total classified workers | 16,506 | 8,678 | 7,828 |
| Workers not classified by industry[2] | 344 | 233 | 111 |
| Total labor force | 16,850 | 8,911 | 7,939 |

Z Less than 0.05 percent.

[1]The base of the percentages is the total classified workers.
[2]Includes 125,956 male and 71,913 female new workers.

Note: Data are based on results from the 1970 census of population.

Source: Thailand NSO, 1973, table 21.

## Table A-9. DISTRIBUTION OF THE LABOR FORCE, BY SEX AND OCCUPATION: 1970

(Figures may not add to totals due to rounding)

| Occupation | Both sexes | Male | Female |
|---|---|---|---|
| PERCENT[1] | | | |
| All occupations | 100.0 | 100.0 | 100.0 |
| Professional, technical, and related workers | 1.7 | 1.9 | 1.5 |
| Administrative, executive, and managerial workers | 1.5 | 2.6 | 0.2 |
| Clerical workers | 1.1 | 1.5 | 0.8 |
| Sales workers | 5.0 | 4.3 | 5.9 |
| Farmers, fishermen, hunters, loggers, and related workers | 79.5 | 75.8 | 83.6 |
| Miners, quarrymen, and related workers | 0.3 | 0.4 | 0.1 |
| Workers in transport and communication occupations | 1.4 | 2.5 | 0.1 |
| Craftsmen, production process workers and laborers not elsewhere clsssified | 6.7 | 8.3 | 4.8 |
| Service, sport, and recreation workers | 2.8 | 2.8 | 2.9 |
| NUMBER (in thousands) | | | |
| Total classified workers | 16,622 | 8,764 | 7,858 |
| Workers not classified by occupation[2] | 228 | 147 | 82 |
| Total labor force | 16,850 | 8,911 | 7,939 |

[1]The base of the percentages is the total classified workers.
[2]Includes 125,956 male and 71,913 female new workers.

Note: Data are based on results from the 1970 census of population

Source: Thailand NSO, 1973, table 19.

## Table A-10. DISTRIBUTION OF AGRICULTURAL AND NONAGRICULTURAL WORKERS, BY SEX AND STATUS: 1970

(Figures may not add to totals due to rounding)

| Status | Both sexes | | Male | | Female | |
|---|---|---|---|---|---|---|
| | Agri-cultural | Nonagri-cultural | Agri-cultural | Nonagri-cultural | Agri-cultural | Nonagri-cultural |
| PERCENT[1] | | | | | | |
| Total labor force | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Employers | 0.1 | 1.2 | 0.2 | 1.6 | 0.1 | 0.6 |
| Workers on own account | 31.1 | 25.6 | 52.8 | 24.4 | 9.1 | 27.7 |
| Salaried employees and wage earners | 4.1 | 60.2 | 4.8 | 68.3 | 3.4 | 47.0 |
| Family workers | 64.7 | 13.0 | 42.1 | 5.7 | 87.5 | 24.8 |
| NUMBER (in thousands) | | | | | | |
| Total classified workers | 13,155 | 3,262 | 6,615 | 2,020 | 6,540 | 1,242 |
| Others and status unknown | 47 | 43 | 21 | 22 | 25 | 20 |
| Total labor force[2] | 13,202 | 3,304 | 6,636 | 2,042 | 6,566 | 1,262 |

[1]The base of the percentages is the total classified workers.
[2]Excludes 106,673 males and 39,239 females not classified by industry.

Note: Data are based on results from the 1970 census of population.

Source: Thailand NSO 1973, table 22.

# Major Sources


Alers, J. Oscar, Winich Asavasena, Chaichana Suvanavejh, and Allan G. Rosenfield. 1973. "Thailand." **Studies in Family Planning.** Vol. 4, No. 5. The Population Council. New York.

Arnold, Fred (East-West Population Institute). 1977. Personal communication.

———. 1978. Personal communication.

Arnold, Fred and Mathana Phananiramai. 1975. **Revised Estimates of the 1970 Population of Thailand.** Research Paper No. 1, National Statistical Office. Bangkok.

Arnold, Fred, Mathana Phananiramai, Robert D. Retherford, and Lee-Jay Cho. 1976. **Estimates of Fertility in Thailand: An Application of Own-Children Analysis.** Unpublished paper presented at the Second Own-Children Workshop, East-West Population Institute, October 18-22.

Arnold, Fred, Robert D. Retherford, and Anuri Wanglee. 1977. **The Demographic Situation in Thailand.** Papers of the East-West Population Institute, No. 45. Honolulu.

Bourgeois-Pichat, Jean. 1959. **An Attempt to Appraise the Accuracy of Demographic Statistics for an Under-Developed Country: Thailand.** United Nations, Working Paper No. 1. New York.

Brass, William and Ansley J. Coale. 1968. "Methods of Analysis and Estimation." Chapter III in William Brass, et al., **The Demography of Tropical Africa.** Princeton.

Chulalongkorn University, Institute of Population Studies and Thailand National Statistical Office. 1973. **Population Projections for Thailand, 1960-2000.** Bangkok.

———. 1977a. **The Survey of Fertility in Thailand: Country Report.** Vol. I. World Fertility Survey Report No. 1. Bangkok.

———. 1977b. **The Survey of Fertility in Thailand: Country Report.** Vol. II. World Fertility Survey, Report No. 1. Bangkok.

Das Gupta, Ajit, Samruay Chotechanapibal, Thip Chalothorn, and Wiwit Siripak. 1965. "Population Perspective of Thailand." **Sankhya.** Series B, Vol. 27. Parts 1 and 2, pp. 1-46.

Debavalya, Nibhon. 1975. **A Study of Female Labor Force Participation and Fertility in Thailand.** Unpublished Ph.D. dissertation, University of Pennsylvania.

Food and Agriculture Organization. 1976. **Production Yearbook 1975.** Rome.

Fulton, John P. 1975. **Evaluation of Selected Aspects of the 1970 Census of Thailand.** Unpublished Masters thesis, Brown University.

Hemachudha, Chitt and Allan G. Rosenfield. 1975. "National Health Services and Family Planning: Thailand, a Case Study." **American Journal of Public Health.** Vol. 65, No. 8, pp. 864-871.

Hemachudha, Chitt, Winich Asavasena, Somsak Varakamin, Allan G. Rosenfield, Gavin Jones, and J. Oscar Alers. 1972. "Thailand." **Studies in Family Planning.** Vol. 3, No. 7. The Population Council. New York.

Knodel, John and Pichit Pitaktepsombati. 1975. "Fertility and Family Planning in Thailand: Results from Two Rounds of a National Study." **Studies in Family Planning.** Vol. 6, No. 11. The Population Council. New York.

# Major Sources—Continued

Knodel, John and Sauvaluck Piampiti. 1977. "Response Reliability in a Longitudinal Survey in Thailand." **Studies in Family Planning.** Vol. 8., No. 3. The Population Council. New York.

Knodel, John and Visid Prachuabmoh. 1973. **The Fertility of Thai Women.** Institute of Population Studies, Chulalongkorn University Research Report No. 10. Bangkok.

Lee, Luke T. 1971. **Population and Law: A Study of the Relations Between Population Problems and Law.** Durham.

Nortman, Dorothy and Ellen Hofstatter. 1976. "Population and Family Planning Programs: A Factbook. **"Reports on Population/Family Planning.** No. 2. The Population Council. New York.

Prachuabmoh, Visid, John Knodel, and Pichit Pitaktepsombati. 1973. **The Longitudinal Study of Social, Economic and Demographic Change in Thailand: The Second Rounds.** Institute of Population Studies, Chulalongkorn University Paper No. 3. Bangkok.

Rosenfield, Allan G., Chitt Hemachudha, Winich Asavasena, and Somsak Varakamin. 1971. "Thailand: Family Planning Activities, 1968 to 1970." **Studies in Family Planning.** Vol. 2, No. 9. The Population Council. New York.

Rungpitarangsi, Benjawan. 1974. **Mortality Trends in Thailand: Estimates for the Period 1937-1970.** Institute of Population Studies, Chulalongkorn University Paper No. 10. Bangkok.

Som, Ranjan Kumar. 1973. **Recall Lapse in Demographic Enquiries.** New York.

Suvanavejh, Chaichana and Peter J. Donaldson. 1974. "Thailand." **Studies in Family Planning.** Vol. 5, No. 5. The Population Council. New York.

Thailand Division of Vital Statistics. 1970. **Public Health Statistics: Thailand, 1970.** Bangkok.

Thailand Ministry of Public Health Family Health Division (MPHFHD). no date. **1972 Annual Report.** Bangkok.

Thailand National Economic and Social Development Board, National Statistical Office, and Chulalongkorn University, Institute of Population Studies. 1974. **The Population of Thailand.** National Population Monograph in the CICRED Series. Bangkok.

Thailand National Statistical Office (NSO). 1962. **Thailand Population Census: 1960. Whole Kingdom.** Bangkok.

_____. 1970. **Report of the Survey of Population Change, 1964-67.** Bangkok.

_____. 1973. **1970 Population and Housing Census. Whole Kingdom.** Bangkok.

_____. 1976a. **Population Projections for Thailand, 1970-2000 (Whole Kingdom).** Bangkok.

_____. 1976b. **Report of the Labor Force Survey, Whole Kingdom (Round 1). January-March 1975.** Bangkok.

_____. 1976c. **Report of the Labor Force Survey, Whole Kingdom (Round 2). July-September 1975.** Bangkok.

_____. 1976d. **The Survey of Population Change: 1974-75.** (Thai version.) Bangkok.

_____. no date. **Report of the Survey of Population Change, 1964-65.** Bangkok.

Thomlinson, Ralph. 1971. **Thailand's Population: Facts, Trends, Problems, and Policies.** Bangkok.

United Nations. 1965. **Population Bulletin of the United Nations, No. 7 – 1963: With Special Reference to Conditions and Trends of Fertility in the World.** New York.

## Major Sources—Continued

_____. 1966. **An Evaluation of the Demographic Statistics of Thailand.** Working Paper No. 2. New York.

_____. 1976a. **Demographic Yearbook 1975.** New York.

_____. 1976b. **Statistical Yearbook 1975.** New York.

U.S. Agency for International Development. no date a. **Family Planning Service Statistics, Annual Report 1974.** Washingon, D.C.

_____. no date b. **Family Planning Service Statistics, Annual Report 1975.** Washington, D.C.

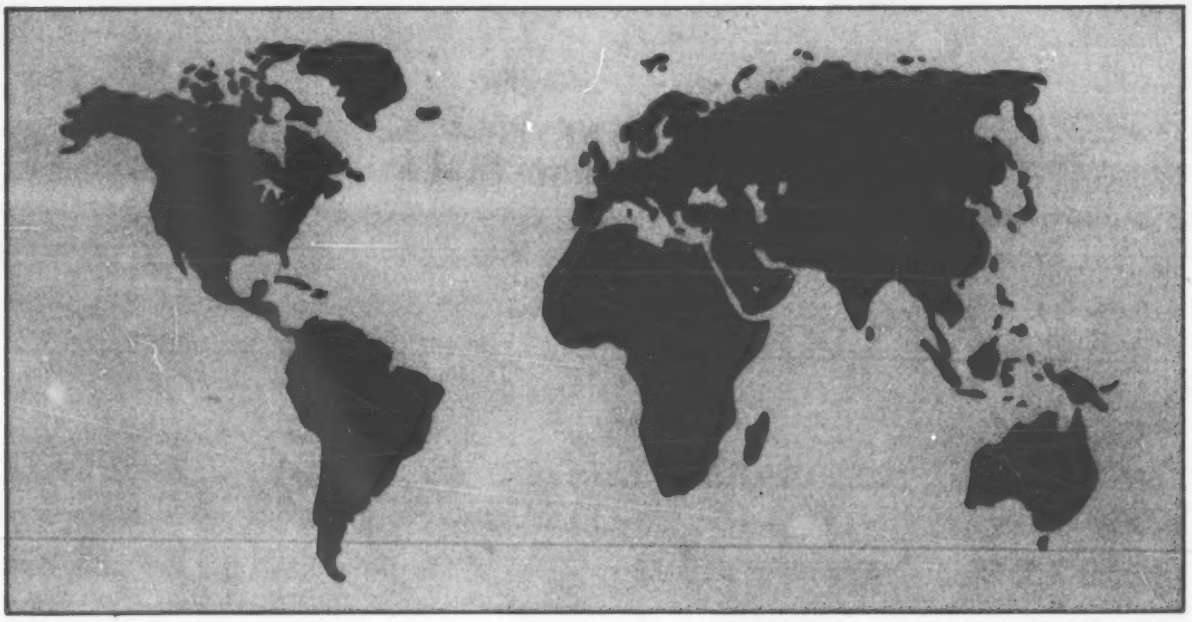
U.S. Bureau of the Census. 1975. **Family Planning Statistics: 1965 to 1973, Africa, Asia, and Latin America,** by William O'Leary, Eugene Vandrovec, and Gary Lewis. ISP-73. Washington, D.C.

Varakamin, Somsak. 1975. "Thailand." **Studies in Family Planning.** Vol. 6, No. 8. The Population Council. New York.

Wanglee, Anuri (Thailand National Statistical Office). 1977. Personal communication.

Wishik, Samuel M. and Kwan-hwa Chen. 1973. **Couple-Year of Protection: A Measure of Family Planning Program Output.** International Institute for the Study of Human Reproduction, Columbia University. Manuals for Evaluation of Family Planning and Population Programs, Manual No. 7. New York.

☆ U. S. GOVERNMENT PRINTING OFFICE : 1978—261-239/1054



# WORLD DEMOGRAPHIC MAPS

These three maps provide specific data on the fertility, population growth, and mortality patterns of the world. They were developed by the International Statistical Programs Center of the Census Bureau for the Office of Population, Agency for International Development. Each map measures 10½ x 16 inches and is printed in color.

**World Fertility Pattern, 1972.** (ISP-WCF-72) Births per 1,000 population are indicated for each country. Four separate tones of red and yellow show levels of fertility.

**World Population Growth Patterns, 1972.** (ISP-WCG-72) Annual rate of population growth is shown by percent for the countries of the world. Four separate tones of blue and yellow show levels of growth.

**World Mortality Pattern, 1972.** (ISP-WCM-72) Deaths per 1,000 population are indicated for each country. Three separate tones of brown and yellow show levels of mortality.

**Each map is priced at 25 cents.**

(please detach along this dotted line)

**ORDER FORM**

C56.242/3: F41/972
C56.242/3: G91/972
C56.242/3: M84/972

Enter number of copies
__ **World Fertility Pattern, 1972** at 25 cents
__ **World Population Growth Patterns, 1972** at 25 cents
__ **World Mortality Pattern, 1972** at 25 cents

Name

Address

City State Zip code

I enclose $ _____ (check, money order, or Supt. of Documents coupons) or charge to my Deposit Account No. _____
Total Amount $_____

**MAIL ORDER FORM WITH PAYMENT TO**

**Superintendent of Documents**
**U.S. Government Printing Office**
**Washington, D.C. 20402**

or any U.S. Department of Commerce district office

**FOR USE OF SUPT. DOCS**
Enclosed
To be mailed later
Refund
Coupon refund
Postage

MAKE CHECK OR MONEY ORDER PAYABLE TO SUPERINTENDENT OF DOCUMENTS
To Insure Prompt, Accurate Shipment, Place Correct Address on Mailing Label Below

(please type or print)

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

**OFFICIAL BUSINESS**

World Demographic Maps

Name _____

Street Address _____

City, State, and ZIP Code _____

POSTAGE AND FEES PAID
U.S. GOVERNMENT PRINTING OFFICE
375
**Special Fourth Class Rate Book**

# LIST OF REPORTS

Country Demographic Profiles have recently been published or are forthcoming in the near future (in the ISP-DP series of reports) for the following countries:

No. 4 - Costa Rica *(Issued August 1977)*
No. 5 - Ghana *(Issued September 1977)*
No. 6 - Guatemala *(Issued October 1977)*
No. 7 - Panama *(Issued November 1977)*
No. 8 - Sri Lanka *(Issued November 1977)*
No. 9 - Jamaica *(Issued November 1977)*
No. 10 - Honduras *(Issued December 1977)*
No. 11 - Kenya *(Issued January 1978)*
No. 12 - Republic of China *(Issued February 1978)*
No. 13 - Chile *(Issued February 1978)*
No. 14 - Mexico
No. 15 - Thailand *(Issued April 1978)*
No. 16 - India
No. 17 - Republic of Korea
No. 18 - Indonesia
No. 19 - Brazil

(Reports Nos. 1 and 2, published in 1973, represent earlier versions of Costa Rica and Ghana. Report No. 3 was an earlier version for the Republic of China, and was published in 1974)